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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,722	07/24/2001	Joun-Ho Lee	8733.491.00	1798

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MCKENNA LONG & ALDRIDGE LLP  
1900 K STREET, NW  
WASHINGTON, DC 20006

EXAMINER

CHUNG, DAVID Y

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 01/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/910,722

Applicant(s)

LEE ET AL.

Examiner

David Chung

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other:

Art Unit: \*\*\*

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-5, 8-11, 13, 14, 16, 18 and 19 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Kim (U.S. 5,909,035).

As to claims 1-5, 14 and 16, Kim discloses a thin film transistor array comprising pixel electrodes, gate and data lines, a gate short line, data short line, and a static electricity preventing circuit. Note in figure 7, gate lines 140 and data lines 150 arranged in the display area, and gate short line 160 and data short line 170 arranged in the non-display area. Kim discloses that a low level voltage  $V_{gl}$  is applied to the gate short line 160 to stabilize operation of the first static electricity preventing circuits 120. Kim discloses that a voltage  $V_{com}$  is applied to the data short line 170 to stabilize operation of the second static electricity preventing circuits 130. See column 7, lines 57 – 67.

Art Unit: \*\*\*

As to claim 18, Kim discloses that voltage  $V_{gl}$  applied to the gate short line to stabilize operation of the first static electricity preventing circuits is the same as the voltage applied to the gate lines to turn off the TFT's.

As to claims 8 and 19, Kim discloses that voltage  $V_{com}$  applied to the data short line to stabilize operation of the second static electricity preventing circuits is the same as that applied to the common electrodes.

As to claim 9, the horizontal portions of data short line 150 are parallel to gate lines 140.

As to claim 10, the vertical portions of gate short line 160 are parallel to data lines 170.

As to claim 11, the data short line 150 includes a common line, which connects to each of the data lines through the static electricity preventing circuits.

As to claim 13, note the rectangular pad portions in the non-display area of figure 7, and the static electricity preventing circuits 120 and 130.

2. Claims 1-5, 9-11, 14, 16 and 17 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Aoki et al. (U.S. 6,025,835).

Art Unit: \*\*\*

As to claims 1 and 14, Aoki et al. discloses a driving circuit for a display apparatus, which includes a first common line for supplying a positive phase picture signal and a second common line for supplying a negative phase picture signal. Note in figure 1, common auxiliary lines 111 and 112, which supply picture signals VA and VB. Figure 2 is a timing chart of positive phase picture signal VA and negative phase picture signal VB.

As to claims 2-5 and 16, note in figure 1, the thin film transistor 105, pixel electrode 106, common electrode 107, data line 103, and gate line 104.

As to claims 9-11, note that both common auxiliary lines 111 and 112 are parallel to gate lines 103 in figure 1.

As to claim 17, the timing chart of figure 2 clearly shows that the two signals VA and VB applied to common auxiliary lines 111 and 112 have polarity periodically opposite to each other.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: \*\*\*

3. Claims 6 and 7 rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (U.S. 5,909,035).

As to claim 6, Kim does not disclose an in-plane switching liquid crystal display. However, IPS-type liquid crystal displays were well known and obvious for their fast response times. Kim teaches that the benefits of the disclosed TFT array include enhanced stability and testability. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the structure of Kim with an IPS-type display in order to combine the enhanced stability and testability as taught by Kim with the fast response time of typical IPS-type displays.

As to claim 7, Kim discloses that voltage  $V_{gl}$  applied to the gate short line to stabilize operation of the first static electricity preventing circuits is the same as the voltage applied to the gate lines to turn off the TFT's.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 12 and 15 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In both embodiments described in the specification, the first auxiliary line receives a first signal, the second auxiliary line receives a second

Art Unit: \*\*\*

signal, and the first line also receives the second signal. See invention summary, pages 9 and 10. It is unclear then how the second auxiliary line can receive a signal having polarity opposite to a polarity of a signal applied to the first line as stated in claim 12, or how the first and second auxiliary lines can receive the same signal as stated in claim 15.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (703) 306-0155. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.

